

T H E E L E C T R O N

NEWSLETTER OF THE INSTITUTION OF ELECTRONICS

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ELECTRONIC APPLICATIONS IN RETAILING AND DISTRIBUTION

With each issue of *The Electron* The Institution of Electronics seeks to present news and views from a different field of electronic application, in keeping with its objective of providing the broadest field of representation for electronics professionals in the UK.

In this issue we present yet another subject of coverage, namely retailing and distribution, combining news and information from three major exhibitions held at The National Exhibition Centre, Birmingham, from 26th. to 28th. April.

Internet Retailing and eDelivery

The Internet Retailing and eDelivery exhibitions and conference were co-located, with eDelivery now in its second year and Internet Retailing in its sixth. Some 300 exhibitors were featured alone with more than 80 multichannel companies and members of the IRUK TOP500, the 500 most significant retailers in the UK and Europe, who shared their experiences and learning within an education programme that included:

* 8 free conferences under the themes of 'The connected Store of the Future', 'Mobile in Multichannel', 'International and Cross-border', 'Digital Sales and Marketing', 'Insight and Experiences', 'Digital Merchandising', 'Multichannel Fulfilment' and 'Operations in Multichannel'.

* 15 exclusive clinics consisting of one-on-one 30 minute consultation sessions offering opportunities to obtain free expert help on the challenges that retailers are currently facing.

* 20 workshops providing hands-on practical learning led by leading companies in the industry.

Other features of the show included:

* The Digital Store - a showcase for suppliers of new and innovative technologies that are driving the 'bricks meets clicks' experience

*The Innovation Pavilion - a journey presenting some of the most innovative entrepreneurs in the retailing industry and their new solutions

* The Digital Payments Theatre - showing the variety and commercial advantages of the payment methods available and how businesses can take advantage of this to mature elements of the multichannel landscape and offer new opportunities to grow business scale and profitability

* The Marketplaces Theatre - bringing to life the growing capabilities and opportunities of marketplaces as commerce channels for brands, retailers and traders

* The TOP500 Lounge - a meeting place for the TOP500 community

* The Jiangsu Pavilion - with almost 1.4 billion potential customers and year-on-year ecommerce sales growth expected to reach 27.9 per cent, taking the total for online shopping to 2.36 trillion Yuan (£240 billion), ten top Chinese technology providers were invited to the exhibition to help companies to increase brand awareness in China, avoid language problems and avoid potential intellectual property violation

The Commercial Vehicle Show

The Commercial Vehicle Show, by contrast, is in its fifteenth year and is the largest exhibition dedicated to the movement of goods by road. This naturally provided a complementary showcase to eDelivery and Internet Retailing, focusing on the transport and logistics side of distribution with a number of interesting developments in the electronics field.

Commenting on this show, Chief Executive of The Road Haulage Association, Richard Burnett, said:

"The increase in online sales, where delivery within a 24-hour period is not always financially viable for large vehicles, has resulted in an increase in van sales. This is clearly reflected in the number of van manufacturers exhibiting at this year's show."

Below is a selection of news items from the three shows.

MOBILE APPS GROWING AS A RETAIL TOOL

Research by *Internet Retailing* magazine and its Knowledge Partner Poq has shown that mobile apps are growing steadily as a retail tool with 36 per cent of the IRUK TOP500 retailers now in possession of an iOS app, a rise of 2 per cent on a similar study conducted in 2015.

Android apps, measured for the first time, were found to be in use by 30 per cent of listed retailers, while 23 per cent of TOP500 retailers had a transactional app and 20 per cent had native apps. The evidence thus shows that use of such apps is expanding, but it was also found that around 50 per cent of these apps contained bugs - some froze, some crashed, some showed empty home screens and some were unavailable in English.

Anonymised Poq analysis of retailers using its app platform aimed to uncover the extent to which different features contributed to conversion.

The most common feature detected was the ability to view a wishlist from the app. Poq analysis suggested that apps with this feature had a conversion rate of 1.8 times the platform average, browsing time that is 3.5 times longer, and an average order value of 0.95, where the average is 1.0. Eighty, or 16 per cent, of the TOP500 retailers had this feature and it featured on 45 per cent of iOS apps.

Another popular feature among the IRUK TOP500 retailers' apps was the ability to share on social media. Here, Poq analysis showed that apps with this feature had a conversion rate that is 3.7 times the platform average, browsing time that was 4.6 times longer, and an average order value of 1.05 relative to the platform average. In total, seventy, that is 14 per cent, of the IRUK TOP500 retailers had this feature on their mobile apps.

Mobile Web

With the rise of mobile commerce it was found that 45 per cent of website visits came from a mobile device with many of the TOP500 having moved to design first for mobile. By adopting responsive design and streamlining the number and size of page elements they are able to ensure that their sites will load quickly and are easy to navigate from a touch-based mobile device.

With the assistance of Knowledge Partner GT Metrix Internet Retailing's research sought to ascertain how large the TOP500 retailers' web pages were and how quickly they would load on a mobile device, first in terms of the html content and then on a full page load. The measurements, which were repeated for each website on a range of different days and at different times, indicated that the average time for a mobile homepage to fully load was more than ten seconds and that the average size was 2.3 MB. The fastest performance was observed from Superdrug, whose full homepage loaded in under a second. Around 80 per cent of the retailers analysed had the viewport meta mobile web standard that tells a web browser how to adapt screen size to the device being used.

Further Information

The report entitled 'Serving on-the-go Customers' is published in *Internet Retailing* magazine's special supplement 'Internet Retailing UK TOP500 2016'. Copies may be obtained from Internet Retailing, SJP Media Limited, 52-54 Gracechurch Street, London EC3V 0EH. ISSN 1759-0582. Telephone: 020 7933 8999. www.internetretailing.net/IRUK

BRINGING REAL-TIME RECEIPT ANALYSIS TO RETAILERS

Zoined, a leading provider of out-of-the-box analytics and reporting, has partnered with Star Cloud Services, a subsidiary of Star Micronics, a leading receipt printer manufacturer, to provide retailers with a solution to analyse sales data within receipts so as to engage better with customers.

This service, a first in Europe, works irrespective of the point-of-sale (POS) system in place and Star Cloud Services has the unique ability to transform shopping receipts into valuable digital transaction data such that retailers are provided with a wealth of information about their customers and store operations. This data may then be used to understand customer buying patterns, identify items that are frequently bought together to drive targeted bundle deals, and run store comparison on best and worst selling products.

With Zoined, the data is transformed into straightforward graphs and charts simplifying what is happening without having to scrutinise spreadsheets, enabling retailers to make decisions as to which lines to grow or drop, or where to switch stock from store to store.

CEO of Zoined, Atte Roine, states:

"For the first time retailers do not need to be bound by a POS system to get analytics. We know that many retailers feel frustrated as they can't always get to the heart of their business without running complex queries on the database or data warehouse. That all changes with the partnership between Zoined and Star Cloud Services."

Zoined can be easily integrated with other sales and management applications such as queue management tools, footfall mapping and CRM systems without requiring a complex IT project.

Contact: www.zoined.com

THE TRIGGERED EMAIL BOOSTER

Barilliance, the ecommerce personalisation solutions provider, has launched the Triggered Email Booster, which allows online retailers to retarget any visitor arriving from their email blasts with personalised abandonment emails without requiring them to enter their email address.

In ecommerce customer email addresses have value as they enable continuous engagement with shoppers using personalised content. The bigger the email list the more retargeting emails can be sent, resulting in higher conversion. With conventional methods, however, most site visitors are anonymous, and they abandon websites before submitting their email addresses.

With the Triggered Email Booster if a visitor lands on an ecommerce website from a link in a newsletter that he or she has received from that site, Barilliance can automatically pair that person with their associated email. This solution enables online retailers to identify previously anonymous shoppers. All that is required is a pixel code added to the bottom of the newsletter template. No additional code needs to be installed.

Co-founder of Barilliance, Ido Ariel, states:

"The impact was almost instant for each and every one of the customers that added the pixel to their email blasts. On average, implementing the Booster feature not only increased the number of the cart abandonment emails sent out by the retailers, but has tripled the Dollar value of the recovered sales. Rarely does one feature have such a direct impact on conversions."

Contact: www.barilliance.com

CLOUD COMMERCE: THE FUTURE OF RETAIL?

Internet Retailing, in conjunction with IBM, has published a whitepaper with the above title that presents the following survey results:

- * 59 per cent of retailers see cloud or service models as dramatically influencing the future development of their business in the next decade

- * 82 per cent state that scalability is one of the most important attractions of cloud commerce

- * 59 per cent state that lower barriers of entry to an enterprise technology is one of the most important attractions of the cloud

- * Almost a quarter of retailers scored the benefits of flexibility, time to market and financial efficiency as being 'very persuasive'

- * Half of retailers are concerned about delegating technology infrastructure

- * Three quarters of retailers' development agendas are driven by the activities of tier one retailers such as Amazon, Argos and M and S

The paper points out that whilst many tier one retailers are already realising the benefits of the cloud and cloud-based platforms, such as flexibility and the ability to scale, there are advantages for smaller retailers also:

'Migration to the cloud is a great enabler for smaller retailers to access the same technologies and capabilities of their tier one rivals. It's a market that IBM, the sponsor of this whitepaper, thinks crucial to its future having adapted its enterprise commerce solutions for today's cloud environment, making such functionality more accessible than ever.'

Also emphasised is the fact that successful organisations are not "doing digital retailing" as a bolt-on activity, but are rather 'retailing in the digital era' with the digital channel forming 'a key part of their corporate strategy'.

With regard to technology platforms it is recognised that retailers and brands 'need a technology platform that is scalable and flexible and can adapt to constant innovation as well as providing a best in class experience, without the worry of infrastructure procurement, deployment times and integration'.

The paper adds:

'With enterprise software that is now hosted in the cloud there is no longer a need for expensive, managed infrastructure or teams of people whose primary task is to deploy software updates. Instead, in the software as a service model, deployment of a commerce solution can be faster and more aggressive since less time needs to be spent on planning. Software updates meanwhile take place automatically, on time, and, most importantly, without work required by the retailer.'

'Where once enterprise software dominated, cloud commerce solutions offer the enterprise functionality retailers are used to but set within a cloud environment. This transforms the previously lengthy process of purchase, deployment and regular upgrades into a highly reactive, easy to manage process where retailers are able to get on with their job of retailing rather than worrying about managing complicated infrastructures and software that, without constant review, can be outdated within months.'

The paper concludes with a list of top ten learnings from the research, a key one of which is the attractiveness of the Opex model relative to the traditional Capex model:

'IT departments are changing and the finance departments are following suit. Though some retailers admitted a challenge in making the shift from Capex to Opex in the boardroom they appreciate that the model offers advantages of a buy as you go service that allows retailers financial efficiency, flexibility and a much greater speed to market.'

It is noted that IBM can now enable a move to cloud commerce within just 90 days, meaning that even those just entering the world of ecommerce can now move just as quickly as those that are more established.

Copies of the paper, edited by Liz Morrell, a former features editor for *Retail Week*, are available via www.internetretailing.net

CASE STUDY: LINDT

Swiss-based chocolatier Lindt and Sprugli has been an innovator of chocolate since 1845, when a founder perfected the art of making chocolate. Now, in 2016, a different kind of innovation is being pioneered in the form of a cloud-based web store delivered by IBM and IBM Premier Business Partner CrossView.

The new web store is built on IBM's industry-leading IBM WebSphere® Commerce platform and CrossView's Aurora Plus Commerce on Cloud, offering a quick-deploy solution that unites commerce technology, implementation expertise, retail and digital best practices, hosting and managed services. While Lindt has had an ecommerce presence since 2002, the brand has sought to leverage technology in new ways so as to create a more personalised connection with customers and provide greater access to Lindt confectionery beyond specialty stores and outlets.

Through Microsites Lindt can launch holiday-based promotions and campaigns that sell highly targeted offerings and because the solution is cloud-based capacity can be scaled up or down as demand dictates with each holiday season. On Black Friday and Cyber Monday conversions were up and basket sizes higher than expected and this was attributed to this web solution and the ability to showcase products online that resonate with customers.

In support of the cloud-based web store President and Chief Executive Officer of Lindt and Sprugli (USA), Thomas Linemayr, states:

"In addition to looking for a platform and vendors that would grow with us, we sought a solution that would make it very easy for us to manage promotions, scale capacity and personalise interactions. The site allows us to engage with customers in meaningful, thoughtful ways and to understand their behaviour. We have a very strong pipeline of innovation coming through every year and this platform is great because it will enable us to very quickly introduce new offerings."

This case study is featured in the whitepaper reviewed above.

More information about IBM WebSphere® Commerce may be obtained additionally by visiting ibm.biz/b2c-ecommerce

TAMING THE BLACK FRIDAY BEAST

Black Friday 2015 was by all accounts more profitable and less painful than in 2014, most notably for online retailers, with research from technology publication *ITProPortal* suggesting a record £1 billion for ecommerce sales - a rise of 30 per cent on 2014.

A report by eDelivery exhibitor Electio, a specialist in enabling simple, rapid access to delivery services from the world's leading carriers through one SaaS platform, suggests, however, that the benefits did not come easily.

In 'Are we taming the Black Friday Beast?' researchers at Electio looked behind the scenes to discover retailer infrastructures that were stretched to the limit and large numbers of disappointed shoppers, not to mention an air of negativity among some major retailers. Asda, notably, did not participate in the event last year, whilst Mark Bolland of M and S is quoted as follows:

"Researchers should turn their back on Black Friday. It has not done British retail any good to just put things out at half price and it isn't having an overall positive effect on the overall profitability of British retailers."

That said, 2015 is described in the report as 'the year of ecommerce':

'The bricks and mortar retailers spent huge amounts on additional in-store manpower, only to find stores quiet as consumers turned to the internet to spend a record £1 billion online.'

The research showed, however, that whilst 32 per cent of consumers had apparently planned to shop on a smartphone, only 19 per cent actually did so, and the reason for this was diagnosed as being 'due in part to the quality and responsiveness of mobile ecommerce sites.'

The report notes that on Black Friday 2015 one in five websites crashed before 9am with scalability being a major issue:

'Pages on the Argos website were taking almost four seconds to load and the entire site was unavailable for at least 20 per cent of the time. In contrast, Amazon, John Lewis and Boots enjoyed 100 per cent availability.'

Amazon, who sold over 7.4 million items, were noted particularly to have 'dealt comfortably with both demand and logistics'. Currys PC World, who sold 30 televisions a minute online, also had a solution:

'Currys put shoppers in a virtual line in an effort to regulate traffic. In coming years demographics could go on to play a huge part in who we serve first online.'

The researchers point out that in this game a one second delay in load time can lead to a 7 per cent loss in conversions and therefore they pose the question 'is your infrastructure ready for the big day?'

The report urges retailers to 'use innovation in technology to match customer expectations' and this principle is very much at the heart of what Electio is now offering:

'We created a delivery management platform capable of evolving in line with changing consumer demands, designed specifically with 21st. century shoppers' ever-increasing delivery expectations in mind. Today's retailers want to work with progressive technology companies that understand the issues they face. That's why we embrace a customer-centric approach. Electio reflects everything retailers have said they need in order to challenge the norm in delivery.'

Further information may be obtained on 03300 555 284. Email: hello@electiodelivers.com

RETAIL'S BOT PROBLEM

Bots are automated web traffic on a retailer's site, each having a different purpose. Some are clearly negative, as with DDoS or application-layer attacks, but not all are bad. Left unchecked, however, they can impact on such areas as website performance, search visibility and on-site experience. In particular, bots affect how customers find a site, what type of web experience customers have whilst on a site, and long-term customer value and loyalty.

According to Internet Retailing exhibitor Akamai, a global leader in Content Delivery Network (CDN) services, bots can account for somewhere between 40 and 60 per cent of web traffic on a retailer's site. The problem is that if a retailer does not know what types of bots are on their site they are not in a position to be able to act to reduce the impact of the bots on the customer experience.

Search engines create bots to crawl websites and return information on a site's content, which helps to shape how those websites are prioritised in search results. This means that web retailers need to ensure high website performance for search engine crawlers as well as users because slow site load times can have a negative effect on rankings.

Online retailers also create bots or else contract with a third party service to crawl their own site in order to evaluate how effective their Search Engine Online efforts are. A related aspect of bot interaction involves partners who sell a retailer's product or service through other channels. They will scrape the retailer's site to ensure that they have the most up-to-date pricing and content. The purpose is legitimate and the benefit real, that is to say to extend the retailer's reach and audience. It remains a challenge for the retailer, however, to ensure that the bots obtain the information needed without negatively impacting on the on-site experience.

On-site Experience

Once a retailer has brought a shopper onto its site it is necessary to ensure a high-quality user experience such that the shopper can find the desired product or service quickly and easily. Unfortunately, too many bots operating too freely, regardless of type or intention, can cause a degradation of website performance resulting in a negative web experience.

Another problem is that a proliferation of bot traffic can cause marketing data, which is used to drive key tactical and strategic decisions, to become corrupted. Bots skew the data and misrepresent the true nature of a web retailer's customers, which then invalidates conclusions drawn from the data set.

Third parties can also use bots to get between web retailers and their customers. For example, many online retailers employ strategies involving flash sales or sales of limited inventory to generate 'buzz' and draw customers to their site. Malicious bots, however, can impact on the effectiveness of these strategies by automating the purchase of products or services that are time limited (such as flights or event tickets) to resell on other sites. This then leads to a poor customer experience as legitimate buyers are unable to acquire a product or service, or are compelled to pay more than the market price.

The ideal Solution

According to Akamai the ideal solution would allow an online retailer to manage bot traffic so as to maximise the positive effects and minimise the negative depending on the type of bots that are observed. In particular there needs to be control where bots are found to be "throttling" website access, for example at holiday times, or otherwise are overly aggressive when crawling the site. Competitors, for example, can use bots to crawl the site and 'scrape' data such as product mix, pricing and content interfering with the value and uniqueness of the web content that the retailer worked hard to create.

Akamai state:

'When a web retailer encounters bad bots, blocking them is only a temporary solution that is ineffective in the long run - blocked bots will simply return smarter and faster. By managing how these bots are allowed to interact with the site, a web retailer can minimise the negative impact of those bots without tipping off the operator that the retailer is on to them. Two common solutions are simply slowing them down to reduce the value and timeliness of the information they are gathering or serving them alternative information - pushing them to a page with intentionally inaccurate web content.'

The Akamai Bot Manager

In direct response to the current state of bot solutions, Akamai has created a unique alternative for online retailers that are struggling to deal with the bot problem. This is designed to allow the retailer to identify, categorise and manage the bots - both good and bad - in order to achieve the desired goals for its website.

The solution, known as Bot Manager, provides a range of management actions, beyond just blocking, to assist organisations to maximise the positive and minimise the negative impacts of their bot traffic. They can then analyse and report the activity to improve visibility on the bot issue. It can also assist with the handling of marketing data:

'Website and page-view statistics can be significantly skewed by bot traffic making it difficult to understand the behaviour of real users interacting with the site. Bot Manager identifies bot-generated requests in order to filter out bot traffic from human traffic, which can improve marketing's data and analysis, and lead to better business decisions.'

Further Information

Further information about this product may be obtained from Akamai on 01784 225 531. Email: sales-uk@akamai.com

EIRABOT: ADVANCED WAREHOUSING ROBOTICS

EiraTech, the innovative Dublin-based developer of robotics solutions for the e-fulfilment sector, previewed its latest award winning robot, the EiraBot 4, at eDelivery 2016.

Uniquely among current robotics and automation solutions the EiraBot does not require the installation of any major infrastructure changes to the existing warehouse environment such as rails or conveyors. Instead, it relies for guidance on labels that are placed at strategic locations on the

warehouse floor along with the EiraTech robot management system, which communicates with the robot via a supplied WiFi link.

The EiraBot 4 is designed particularly to reduce the 70 per cent of a picker's time that is wasted walking around a warehouse or otherwise spent searching for an item. Orders are transmitted from the Warehouse Management System to the EiraTech system and can be consolidated or processed sequentially. The Robot Handling System releases the EiraBots to retrieve the racks that hold the items being ordered. When the rack arrives at the picking station the picker is guided by a light system to the cell location that contains the required item. The picker then scans the item to confirm that it is the correct item and places the item for packing on a pick by light rack. Once the item has been scanned the EiraBot will take the rack back to its allocated position.

Chief Executive Officer for EiraTech, Alexey Tabolkin, states:

"The EiraTech system is designed to make the very best use of valuable personnel by eliminating the 70 per cent of their time currently wasted walking and searching by bringing the goods to them in sequence at a picking station. Lack of any built infrastructure associated with the EiraBot means a much shorter deployment time for merchants and 3PLs, but also allows for ease of expansion, contraction, and/or moving as necessary as your needs change. In fact, our business model can build in the peaks and troughs of activity that many online enterprises experience, if required."

The new robot has a load bearing capability of up to 350 kilograms with a speed of up to 14 kilometres per hour. Accuracy is 99.5 per cent.

An MHI Report this year states that 74 per cent of companies surveyed intend to adopt robotics in the supply chain within the next six to ten years.

Further information may be obtained from EiraTech Robotics Limited, Blanchardstown Industrial Park, Snugborough Road, Blanchardstown, Dublin 15, Ireland. Email: info@eiratech.com

WORLD FIRST FOR OCADO WAREHOUSE

Ocado and Technology Partner Cambridge Consultants are claiming a world first in the way that they have used wireless networks to make the online grocer's next generation warehousing more efficient

Wireless control systems developed through the partnership are now being deployed in Ocado's new automated warehouse in Andover, where 1,000 machines are communicating up to ten times a second in order to coordinate and control the movements of crates carrying millions of grocery items in real-time.

Cambridge Consultants, who are home to one of the largest independent wireless development teams in existence, were set the challenge of developing technology that would perform a role equivalent to controlling the movements of all of the aircraft flying into and out of Heathrow Airport in a day, but all at the same time and while they are circling around within a few kilometres of each other.

The team recognised that a system based on 4G telecoms technology deployed in the unlicensed 5GHz WiFi band gave the best chance of achieving Ocado's goal of coordinating thousands of fast moving machines within a fraction of a second.

In the article 'World First for Ocado Warehouse' in *eDelivery* magazine, issue 5, April 2016, Tim Ensor, Head of Connected Devices at Cambridge Consultants, is quoted as follows:

"It was clear early on that no technology existed which would do what Ocado needed. WE created a system based on the principles of 4G but which can support 1,000 devices from a single base station - over ten times more than is usually possible. At the same time, we needed to ensure it met the requirements of operating in licence-free spectrum - the first time that this has been done with 4G technology."

INNOVATIVE APPLICATIONS FOR TRAILER MANAGEMENT

TIP Trailer Services previewed two innovative electronic applications for trailer management at The Commercial Vehicle Show.

First !inspect is an app that uses the camera of mobile devices to enable logistics professionals to visually report the condition of trailers to a central administration system. The application integrates to a website where reports complete with individual notes can be viewed, saved and printed. The application is said to be ideal for sharing the condition of equipment, including damage, and each report can contain up to twenty photographs.

The second initiative is a software platform known as FleetRemote, which uses enriched data from the Electronic Braking System to enable transport operators to not just monitor trailer performance, but also to report on potentially critical failures before they occur by predicting when they will happen.

A key function of FleetRemote is the tracking of brake performance with the system having the potential to offer brake performance monitoring and assessment in order to support transport operators' statutory maintenance and roadworthiness requirements.

FleetRemote can be used in conjunction with devices such as iTAP, a further unique and innovative product that utilises WiFi technology to offload data from a trailer to the system, as well as reporting aspects of trailer performance to the vehicle driver via its mobile device app.

Users can view safety critical warnings such as air leaks, that enable transport operators to continually assess the health and roadworthiness of their equipment and take preventive action so as to prolong the life of components and prevent breakdowns.

The system is TCAN compliant, using the latest protocol for EBS data exchange and is a joint venture between TIP Trailer Services and Knorr-Bremse.

Further information may be obtained from TIP Trailer Services, Genesis Centre, North Staffordshire Business Centre, Innovation Way, Stoke-on-Trent ST6 4BF. Telephone: 01782 366 534. Email: janice.marshall@tipeurope.com

INDUSTRY FIRST RE-TORQUE SAFETY APP

Commercial Vehicle Show exhibitor Bridgestone has launched the commercial motor industry's first ever re-torque safety app for all commercial vehicle operators.

The free Bridgestone Retorque App has been developed following a major information gathering exercise involving bus, truck and trailer original equipment manufacturers and will offer the correct torque settings on all vehicles free of charge at the swipe of a mobile phone or tablet. It will be of use to anyone who removes and replaces truck wheels and plans are underway to extend the concept to include van detail also.

Several hundred commercial vehicle wheel detachments currently occur each year and the road safety charity Brake point out that 16 per cent of wheel loss incidents cause injury and 4 per cent cause death. If a wheel becomes detached it can accelerate to a speed of around 93 mph, which is potentially fatal to an oncoming cyclist or pedestrian. It may also cause a driver to lose control of a vehicle, which may also result in death or serious injury.

In the past it has been necessary to sift through pages of a manual to obtain information and Bridgestone are hopeful that this new app will help to dramatically reduce the number of instances of wheel detachments.

Further information is available from Bridgestone, Athena Drive, Tachbrook Park, Warwick CV34 6UX. Telephone: 01926 488 512. Email: jennifer.tyers@bridgestone.eu

WORLD'S FIRST 3D TYRE MEASUREMENT HAND HELD SCANNER

Commercial Vehicle Show exhibitor SigmaVision launched the world's first 3D tyre measurement hand held scanner for tread depth measurement at the show.

The TreadReader™ Hand Held Scanner for tread depth measurement eliminates the errors associated with manual depth gauges and provides accurate readings for all vehicle types from light commercial vehicles to heavy goods vehicles, buses, trailers and cars. It can reveal badly or unevenly worn tyres symptomatic of incorrect inflation, wheel misalignment or worn suspension. Colour coded 3D scans can also enable tyre replacement at the optimum time to maximise safety. It is suitable for wet or dirty tyres and all tyre inspection applications in workshops, service centres, inspection lanes, commercial vehicle yards and at the roadside.

The calculated data can be imported into any fleet management system to log tyre scans and produce wear analysis or tyre lifetime modelling.

The patented TreadReader™ tyre measurement technology creates a detailed 3D scan of each tyre constructed from over 300,000 measurement points with an accuracy of less than 0.2mm. By scanning the full width of the tyre and 50mm around the tyre TreadReader™ devices far surpass the accuracy and reliability of traditional dip gauges and non-contact 'laser pointer' measurement devices.

Advanced software algorithms produce detailed colour coded three dimensional tyre tread images that show the condition of the tyre with absolute clarity. The 3D scans can then be viewed on a tablet, mobile phone or PC alongside the calculated tread depths. An operator report is generated instantly showing vehicle identification, 3D tyre scans with colour coded tread warnings, and error alarms for each axle and tyre position.

The scanner is available from SigmaVision and the mobile app is downloaded with simple steps to connect the mobile device to the scanner.

Further information may be obtained from SigmaVision Limited, 7 Landscape Close, Weston-on-the Green, Oxfordshire OX25 3SX. Telephone: 01865 233 030. Email: sue.pryce@sigmavision.com

PLASMA TECHNOLOGY REVOLUTIONISES AERODYNAMICS

New aerodynamic technology in the form of 'Plasma Actuators' was revealed at The Commercial Vehicle Show by the Don-Bur Group, a company that was formed in 1981 and has since become internationally recognised for its innovative development of trailers and rigid bodies.

Current boat-tail aerodynamic solutions are principally designed using large folding tail 'fins' which are angled in at the rear so as to reduce the negative pressure pocket normally associated with bluff rear faces. whilst there is significant research to prove the effectiveness of these boat-tails they are mechanical in nature and are susceptible to damage.

Plasma Actuators, by contrast, utilise a physical effect known as Single Dielectric Barrier Discharge (SDBD).

Don-Bur explain the technology as follows:

'By placing a voltage across two electrodes, one being insulated, air particles become ionised (plasma). When the electrodes are strategically positioned, a fast "active" airflow is created which can be directed in a way to change the normal airflow patterns.'

These Plasma Actuators effectively mimic the effect of a mechanical boat-tail without the associated risk of damage.

At the show Don-Bur, in association with Glasgow University, demonstrated the technology as it was placed around the rear perimeter of a maximum height double deck trailer, which is a trailer shape that is typically well known for its poor aerodynamic properties.

Fuel savings of around 7 per cent are expected to result directly from the application of this technology.

Further information may be obtained from Don-Bur (Bodies and Trailers) Limited, Mossfield Road, Longton, Stoke-on-Trent ST3 5BW. Telephone: 01782 599 666. Email: richard.owens@donbur.co.uk

NEW DIGITAL SIGNATURE CAPTURE FEATURE

TruTac, the transportation software and tachograph analysis specialists, launched a new digital signature capture feature known as eSignLive at The Commercial Vehicle Show.

The new function is set to transform how operators debrief and manage their driver compliance requirements with transport managers having the ability to securely capture digital signatures during infringement debriefs and other documentation, such as the driver's letter, on mobile devices, tablets, laptops and PCs.

The eSignLive system enables click-to-sign and handwritten signature capture, offering a convenient electronic method of signing reports and documents. Signers do not have to download anything and can e-sign using only a standard web browser.

By using eSignLive users can quickly and easily read and sign documents, and the management, filing and auditing of infringement records are made more efficient. All documents are easily stored in TruControl and categorised for easy retrieval.

Terry Ramsey, Managing Director of TruTac, states:

"We are always looking for ways to use the latest technology to assist with compliance management. The eSignLive system gives operators the ability to proactively manage their compliance responsibilities whilst reducing paper based administration."

For further information contact TruTac Limited, Unit 5 Westwood House, Westwood Business Park, Coventry CV4 8HS. Telephone: 024 7669 0000. Email: jemma.james@trutac.co.uk

ADVANCES IN TELEMATICS

VisionTrack, a specialist provider of CCTV solutions, has recently launched the advanced VT2000 device for fleet professionals, which is capable of transmitting video footage using extremely low amounts of data. This makes this type of technology more effective and affordable for fleets, with statistical and visual data obtained almost instantly through the camera.

The VT2000 has a built-in 3G M2M module along with GPS and GLONASS for improved accuracy. It easily streams footage using advanced technology that reduces the amount of data needed to send snapshot video, meaning that a ten-second clip can be transferred with under 350kB. Fleet managers therefore benefit from increased volumes of driving footage, which helps in driver monitoring and training programmes and provides faster access to vital video and telemetry data in the event of an accident.

Further information may be obtained from VisionTrack, Longford House, 19 Mount Ephraim Road, Tunbridge Wells, Kent TN1 1EN. Telephone: 0800 0519 396. Email: info@visiontrack.com

Another notable advance is described in the article 'Cameras cutting Costs' by Tony Hall in the May 2016 issue of *Roadway* magazine. This highlights the growing concerns within the road haulage industry about the reliability of traditional SD card-based technology, which is prone to loss of footage of incidents stemming from corrupted or incomplete data files. There has also been frustration surrounding the time-consuming and costly manual intervention required to access footage, not to mention the reliance on drivers to report a collision without tampering with the evidence.

The article reports the launch of the Intelligent Telematics IT1000 3G vehicle camera, which has been designed specifically to address the recognised limitations of SD card services.

The article states:

'Road transport operators are increasingly turning their attention to 3G devices which transmit video of accidents and near misses via a secure private network to a web-based interface, so that a triggered event is always captured and can be viewed almost immediately online.'

By combining the latest video, telematics and 3G technologies it is now possible to implement a proactive and preventative solution which can help haulage businesses operate more responsibly while at the same time reduce overheads.

Recent analysis of 2,000 commercial vehicles using the IT1000 found that accident frequency reduced on average by 45 per cent, with one operator in particular able to achieve a drop in incidents of 80 per cent. When an incident did occur, average claims cost was 27 per cent lower as a result of using footage and supporting data.'

CASE STUDY: HYDRO CLEANSING LIMITED

UK environmental and liquid waste solutions specialist Hydro Cleansing Limited has partnered with VisionTrack to roll out a next-generation vehicle camera and telematics solution across its fleet in order to attempt to improve driver and cyclist safety.

The VT2000 3G camera with built-in telematics is being installed alongside high definition side and rear facing cameras in all of the cleansing company's distinctive range from small tankers and road sweepers to Europe's largest vacuum recycling unit known as The Terminator. The Terminator alone is being fitted with 14 cameras, providing comprehensive 360 degree video coverage.

The VT2000 connects with VisionTrack's cloud-based 'big data' tracking platform where G-Force, GPS and video data are all recorded in real-time and available on demand to managers for analysis and driver training. This combined camera telematics solution has allowed Hydro Cleansing to move away from having two different providers for visual and statistical fleet information.

Steve Hoad, Owner of Hydro Cleansing, states:

"We have been able to switch from using separate telematics and camera systems to just one. VisionTrack provides an all-encompassing solution, making it easier for us to monitor driving behaviours through one platform.

While there are many benefits to us having cameras, a key factor is cyclist safety. The 360 degree vision provided by the cameras ensures that our vehicles are cycle friendly and means drivers always know when it's safe to move."

Simon Marsh, Managing Director of VisionTrack, adds:

"Hydro Cleansing understands the importance of these cameras, which are vital in supporting drivers operating in busy urban areas to minimise incident risks. The VT2000, used with our other cameras, will give Steve and his team total visibility of their fleet and instant access to all the data they need in one place. It is this type of technology and a commitment from fleets that will help to reduce road incidents."

Contact details: VisionTrack as above.

CASE STUDY: LOGISTIC PLANNING SERVICES

Felixstowe-based Logistic Planning Services is one of a growing number of transport operators that has adopted the Intelligent Telematics IT1000 3G vehicle camera.

The container logistics company has installed the device in 38 HGVs in order to try to improve road safety and achieve savings in insurance. It has replaced the previous SD card system.

The article (ref: 'Cameras cutting Costs' above) states:

'The IT1000 is providing LPS with the means of accessing high-definition footage of any collision within seconds of it occurring along with supporting vehicle data. The first notification of loss (FNOL) helps the company to better manage the claims handling process quickly, proving fault and keeping insurance costs to a minimum.'

LPS is also using the 3G camera solution to enhance driver behaviour. By monitoring crashes, near misses and harsh driving events the company can identify areas of improvement within the HGV fleet. From its central base within the Port of Felixstowe the company has full visibility of driver performance and the necessary insight to support targeted driver training and staff engagement initiatives.'

CASE STUDY: BUNZL GREENHAM

Bunzl Greenham is a leading safety and workplace supplier in the UK. It is part of Bunzl plc, a global FTSE100 company with operations in 29 countries spread across four continents.

Bunzl Greenham specialises in the supply of personal protective equipment (PPE), cleaning and hygiene supplies, and contractors' site equipment.

Until recently the company operated a manual routing system that did not fully utilise its fleet. The routing software was old and did not fit seamlessly with the IT system. Paper delivery manifests and manual scanning of proof of delivery (POD) documents were also outdated and time consuming processes.

Regional Operations Director Terry Parker states:

"First and foremost, we needed a solution which could work in tandem with our in-house business-critical IT software. Managing in excess of 750,000 deliveries per year, we urgently needed to deploy a solution to help us better optimise driving routes, reduce mileage and improve our customer service and communications. Our existing platform was convoluted and inefficient, causing more complexity than gain, and adding up to two hours of additional data entry each day due to its siloed nature. We needed to partner with a new vendor which could provide us with the functionality we urgently needed."

Early in 2015 the company deployed Telogis Route, seamlessly integrating it into its existing IT platform:

"We were able to configure a desktop icon which could be activated at the click of a button. Driver and delivery information from our fleets is now automated and Telogis' intuitive algorithms can quickly calculate the most efficient routes for drivers at the click of a switch."

A notable weakness of the old system was that it was run on a separate server and so lacked the functionality to inform drivers of possible obstructions and on-route delays as they occurred. On this aspect Mr. Parker states:

"As Telogis Route is an intelligent web-based application it can update as and when needed, so if a road closes or blockage emerges we receive alerts in real-time so that we can re-route drivers more effectively. It was a manual operation for staff to route our vehicles in the past, which often led to inaccuracies, for instance, in deciding how many deliveries a vehicle could take or how many vans could be on the road at any one time. This naturally led to operational inefficiencies and missed hours of productivity, which are now accounted for with Telogis."

Another major benefit has been more detailed reporting on drivers and vehicles according to any particular specifications, such as vehicle type or delivery area. On this Mr. Parker says:

"This is a significant improvement and completely changes how we operate as a business - allowing us to measure and compare metrics against our assets in granular detail. For example, we operate two weights in vehicles, 3.5 ton and 7.5 ton. We will now be able to assess what will be the most efficient type of vehicle to run on certain routes, which will deliver a significant financial saving in the long run."

With the new system drivers have been equipped with handheld personal digital assistants (PDAs), which provide visibility into detailed customer and routing information through the cloud.

Mr. Parker adds:

"With Telogis Mobile, the web-based SaaS software gives our drivers customer delivery information, optimised routing and optional satellite navigation. We are able to update and view the status of each delivery in real-time through the devices. Through the PDAs, customers can also sign digitally. Before that we had a more physical system in place in which, following a delivery, written signatures needed to be manually scanned back into the system - a time consuming process of over an hour a day which we can now absorb back into the business"

We've had positive feedback from our drivers who no longer get delayed by outdated 'paper processes' and can get better insights on routes from live data streams on the road. The Telogis platform also encourages our drivers to monitor and self-correct driving behaviours such as harsh braking and idling."

Moving forward, when a customer places an order Bunzl Greenham will automatically record that order and email users to confirm delivery, issuing a proof of delivery (POD) electronically and forwarding this to their accounts department to help streamline customer processes.

Telogis was an exhibitor at The Commercial Vehicle Show and is based at Century Court, Millennium Way, Bracknell, Berkshire RG12 2XT. Telephone: 020 3005 8805. Email: nicky.dinneen@telogis.com